UNITED STATES DISTRICT COURT

for the Western District of Washington

In the Matter of the Search of

(Briefly describe the property to be searched or identify the person by name and address)

941 SW Quinalt Street, Oak Harbor, WA 98277 (SUBJECT PREMISES)

Case No. MJ19-091

)						
APPLICATION FOR A SEARCH WARRANT						
I, a federal law enforcement officer or an attorney for the government, request a search warrant and state under penalty of perjury that I have reason to believe that on the following person or property (identify the person or describe the property to be searched and give its location): The Subject Premises as further described in Attachment A, which is attached hereto and incorporated herein by this reference.						
located in the Western District of Washington, there is now concealed (identify the person or describe the property to be seized):						
See Attachment B, incorporated herein by reference.						
The basis for the search under Fed. R. Crim. P. 41(c) is (check one or more): evidence of a crime; contraband, fruits of crime, or other items illegally possessed; property designed for use, intended for use, or used in committing a crime;						
a person to be arrested or a person who is unlawfully restrained.						
The search is related to a violation of:						
Code Section Offense Description Title 18, U.S.C. § 2252 (a)(2) Receipt or Distribution of Child Pornography Title 18, U.S.C. § 2252(a)(4)(B) Possession of Child Pornography						
The application is based on these facts: ✓ See attached Affidavit continued on the attached sheet						
Delayed notice of days (give exact ending date if more than 30 days: is requested under 18 U.S.C. § 3103a, the basis of which is set forth on the attached sheet.						
Pursuant to Fed. R. Crim. P. 4.1, this warrant is presented: by reliable electronic means; or: telephonically recorded.						
Applicant's signature						
SPECIAL AGENT PATRICK MIZE, HSI Printed name and title						
 The foregoing affidavit was sworn to before me and signed in my presence, or The above-named agent provided a sworn statement attesting to the truth of the foregoing affidavit by telephone. 						
Date: 3-6-19 Paula L M Cello Judge's signature						
City and state: BELLINGHAM, WASHINGTON PAULA L. MCCANDLIS, United States Magistrate Judge Printed name and title						

USAO: 2019R00170

ATTACHMENT A

Description of Property to be Searched

The physical address of the SUBJECT PREMISES is 941 SW Quinalt Street, Oak Harbor, Washington 98277, and is more fully described as a property containing a twostory single-family home with a two-car garage, blue color siding with off-white trim. On the front of the house is tan numbers "941".

The search is to include all rooms, persons, and vehicles on the SUBJECT PREMISES and all garages or outbuildings, attached or detached, and any digital device(s) found therein.

ATTACHMENT A - 1USAO #2019R00170

to:

ATTACHMENT B

ITEMS TO BE SEIZED

The following records, documents, files, or materials, in whatever form, including handmade or mechanical form (such as printed, written, handwritten, or typed), photocopies or other photographic form, and electrical, electronic, and magnetic form (such as CDs, DVDs, smart cards, thumb drives, camera memory cards, electronic notebooks, or any other storage medium), that constitute evidence, instrumentalities, or fruits of violations of 18 U.S.C. § 2252(a)(2) (Receipt or Distribution of Child Pornography) and 18 U.S.C. § 2252(a)(4)(B) (Possession of Child Pornography) which may be found at the SUBJECT PREMISES:

- 1. Any visual depiction of minor(s) engaged in sexually explicit conduct, in any format or media;
- 2. Evidence of the installation and use of P2P software, and any associated logs, saved user names and passwords, shared files, and browsing history;
- 3. Letters, e-mail, text messages, and other correspondence identifying persons transmitting child pornography, or evidencing the transmission of child pornography, through interstate or foreign commerce, including by mail or by computer;
- 4. All invoices, purchase agreements, catalogs, canceled checks, money order receipts, credit card statements or other documents pertaining to the transportation or purchasing of images of minors engaged in sexually explicit conduct;
- 5. Any and all address books, names, lists of names, telephone numbers, and addresses of individuals engaged in the transfer, exchange, or sale of child pornography or evidencing contact with minors;
- 6. Any non-digital recording devices and non-digital media capable of storing images and videos.
 - 7. Digital devices and/or their components, which include, but are not limited

- a. Any digital devices and storage device capable of being used to commit, further, or store evidence of the offense listed above;
- b. Any digital devices used to facilitate the transmission, creation, display, encoding or storage of data, including word processing equipment, modems, docking stations, monitors, cameras, printers, encryption devices, and optical scanners;
- c. Any magnetic, electronic, or optical storage device capable of storing data, such as disks, tapes, CD-ROMs, CD-Rs, CD-RWs, DVDs, printer or memory buffers, smart cards, PC cards, memory sticks, flash drives, USB/thumb drives, camera memory cards, media cards, electronic notebooks, and personal digital assistants;
- d. Any documentation, operating logs and reference manuals regarding the operation of the digital device or software;
- e. Any applications, utility programs, compilers, interpreters, and other software used to facilitate direct or indirect communication with the computer hardware, storage devices, or data to be searched;
- f. Any physical keys, encryption devices, dongles and similar physical items that are necessary to gain access to the computer equipment, storage devices or data; and
- g. Any passwords, password files, test keys, encryption codes or other information necessary to access the computer equipment, storage devices or data;
- 8. Evidence of who used, owned or controlled any seized digital device(s) at the time the things described in this warrant were created, edited, or deleted, such as logs, registry entries, saved user names and passwords, documents, and browsing history;
- 9. Evidence of malware that would allow others to control any seized digital device(s) such as viruses, Trojan horses, and other forms of malicious software, as well as evidence of the presence or absence of security software designed to detect malware; as well as evidence of the lack of such malware;
- 10. Evidence of the attachment to the digital device(s) of other storage devices or similar containers for electronic evidence;

- 11. Evidence of counter-forensic programs (and associated data) that are designed to eliminate data from a digital device;
 - 12. Evidence of times the digital device(s) was used;
- 13. Any other ESI from the digital device(s) necessary to understand how the digital device was used, the purpose of its use, who used it, and when.
- 14. Records and things evidencing the use of the IP addresses 76.104.222.31 (the SUBJECT IP ADDRESS) including:
- a. Routers, modems, and network equipment used to connect computers to the Internet;
 - b. Records of Internet Protocol (IP) addresses used;
- c. Records of Internet activity, including firewall logs, caches, browser history and cookies, "bookmarked" or "favorite" web pages, search terms that the user entered into any Internet search engine, and records of user-typed web addresses.

The seizure of digital devices and/or their components as set forth herein is specifically authorized by this search warrant, not only to the extent that such digital devices constitute instrumentalities of the criminal activity described above, but also for the purpose of the conducting off-site examinations of their contents for evidence, instrumentalities, or fruits of the aforementioned crimes.

1		<u>AFFIDAVIT</u>		
2				
3	STATE OF WASHINGTON)		
4)	SS	
5	COUNTY OF WHATCOM)		
6				

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

I, Brian Patrick Mize, being duly sworn on oath, depose and state:

I. INTRODUCTION AND AGENT BACKGROUND

I am a Special Agent with the U.S. Department of Homeland Security, 1. Homeland Security Investigations (HSI), assigned to the Assistant Special Agent in Charge (ASAC) Blaine, Washington, field office. I have been employed as an HSI Special Agent and its predecessor, the U.S. Customs Service, since 2001. Prior to this assignment, I worked as a Police Officer with the St. Louis Metropolitan Police Department from 1994 to 2000. In my capacity as a Special Agent, I am responsible for conducting investigations into the numerous federal laws enforced by HSI. Since 2006, I have investigated criminal violations relating to child exploitation and child pornography, including violations pertaining to the unlawful production, importation, distribution, receipt, attempted receipt, and possession of child pornography and material involving the sexual exploitation of minors in violation of 18 U.S.C. §§ 2251, 2252(a), and 2252A(a). I am a graduate of the Federal Law Enforcement Training Center (FLETC), HSI (formally known as the U.S. Customs Service) Special Agent Training Program. My training included courses in law enforcement techniques, federal criminal statutes, conducting criminal investigations, and the execution of search warrants. I have participated in the execution of several search warrants which involved child exploitation and/or child pornography offenses and the search and seizure of computers and other digital devices. I am a member of the Internet Crimes Against Children (ICAC) Task Force in the Western District of Washington, and work with other federal, state, and local

law enforcement personnel in the investigation and prosecution of crimes involving the sexual exploitation of children.

- 2. I am submitting this affidavit in support of an application under Rule 41 of the Federal Rules of Criminal Procedure for a warrant to search the residence located at 941 SW Quinalt St, Oak Harbor, Washington 98277 (hereinafter the SUBJECT PREMISES) and any persons located thereon, more fully described in Attachment A, for the things specified in Attachment B to this Affidavit, for the reasons set forth below. I also seek authority to examine digital devices or other electronic storage media. The property to be searched is as follows:
- a. 941 SW Quinalt St, Oak Harbor, Washington 98277 (the SUBJECT PREMISES);
- 3. The warrant would authorize a search of the SUBJECT PREMISES, and a seizure and forensic examination of digital devices found therein, for the purpose of identifying electronically stored data as particularly described in Attachment B; for evidence, fruits, and instrumentalities of violations of 18 U.S.C. §§ 2252(a)(2) (Receipt or Distribution of Child Pornography) and 18 U.S.C. § 2252(a)(4)(B) (Possession of Child Pornography).
- 4. The facts set forth in this Affidavit are based on my own personal knowledge; knowledge obtained from other individuals during my participation in this investigation, including other law enforcement officers; review of documents and records related to this investigation; communications with others who have personal knowledge of the events and circumstances described herein; and information gained through my training and experience.
- 5. Because this affidavit is submitted for the limited purpose of establishing probable cause in support of the application for a search warrant, it does not set forth each and every fact that I or others have learned during the course of this investigation. I have set forth only the facts that I believe are relevant to the determination of probable cause to believe that evidence, fruits, and instrumentalities of violations of 18 U.S.C. §

8 9

10

11 12

14 15

16

17

13

18 19

20

21

22 23

2425

26

2728

2252(a)(2) (Receipt or Distribution of Child Pornography) and 18 U.S.C. § 2252(a)(4)(B) (Possession of Child Pornography), will be found at the SUBJECT PREMISES.

6. Based on the discoveries I have made, as described below, I believe that someone at the SUBJECT PREMISES has used a computer to connect to an Internet Peer-to-Peer (P2P) file sharing program, via Internet Protocol (IP) address 76.104.222.31 (hereinafter "SUBJECT IP ADDRESS"), and distributed videos depicting child pornography. I further believe that computers and other digital devices containing evidence of child pornography will be found following a search of the locations described in Attachment A.

II. DEFINITIONS

7. The following definitions apply to this Affidavit:

<u>Internet Service Providers</u>

"Internet Service Providers" (ISPs), as used herein, are commercial a. organizations that are in business to provide individuals and businesses access to the internet. ISPs provide a range of functions for their customers including access to the Internet, web hosting, email, remote storage, and co-location of computers and other communications equipment. ISPs can offer a range of options in providing access to the Internet including telephone-based dial up, broadband based access via digital subscriber line (DSL) or cable television, dedicated circuits, or satellite-based subscription. ISPs typically charge a fee based upon the type of connection and volume of data, called bandwidth, which the connection supports. Many ISPs assign each subscriber an account name - a user name or screen name, an "email address," an email mailbox, and a personal password selected by the subscriber. By using a computer equipped with a modem, the subscriber can establish communication with an ISP over a telephone line, through a cable system or via satellite, and can access the Internet by using his or her account name and personal password. ISPs maintain records pertaining to their subscribers (regardless of whether those subscribers are individuals or entities). These records may include account application information, subscriber and billing information,

account access information (often times in the form of log files), email communications, information concerning content uploaded and/or stored on or via the ISP's servers.

Internet Protocol (IP) Addresses

b. "Internet Protocol address" or "IP address" refers to a unique number used by a computer to access the Internet. An IP address looks like a series of four numbers, each in the range 0-255, separated by periods (e.g., 121.56.97.178). Every computer connected to the Internet must be assigned an IP address so that the Internet traffic sent from, and directed to, that computer may be properly directed from its source to its destination. Most ISPs control the range of IP addresses.

III. PEER-TO-PEER (P2P) FILE SHARING

- 8. Peer to peer (P2P) file sharing is a method of communication available to internet users through the use of special software programs. P2P file sharing programs allow groups of computers using the same file sharing network and protocols to transfer digital files from one computer system to another while connected to a network, usually on the internet. There are multiple types of P2P file sharing networks on the internet. To connect to a particular P2P file sharing network, a user first obtains a P2P client software program for a particular P2P file sharing network, which can be downloaded from the internet. A particular P2P file sharing network may have many different P2P client software programs that allow access to that particular P2P file sharing network. Additionally, a particular P2P client software program may be able to access multiple P2P file sharing networks. These P2P client software share common protocols for network access and file sharing. The user interface, features, and configurations may vary between clients and versions of the same client.
- 9. In general, P2P client software allows the user to set up file(s) on a computer to be shared on a P2P file sharing network with other users running compatible P2P client software. A user can also obtain files by opening the P2P client software on the user's computer and conducting a search for files that are of interest and currently being shared on a P2P file sharing network.

- 10. Some P2P file sharing networks are designed to allow users to download files and frequently provide enhanced capabilities to reward the sharing of files by providing reduced wait periods, higher user ratings, or other benefits. In some instances, users are not allowed download files if they are not sharing files. Typically, settings within these programs control sharing thresholds.
- 11. Typically, during a default installation of a P2P client software program, settings are established which configure the host computer to share files. Depending upon the P2P client software used, a user may have the ability to reconfigure some of those settings during installation or after the installation has been completed.
- 12. Typically, a setting establishes the location of one or more directories or folders whose contents (digital files) are made available for distribution to other P2P clients. In some clients, individual files can also be shared.
- 13. Typically, a setting controls whether or not files are made available for distribution to other P2P clients.
- 14. Typically, a setting controls whether or not users will be able to share portions of a file while they are in the process of downloading the entire file. This feature increases the efficiency of the network by putting more copies of the file segments on the network for distribution.
- 15. Typically, files being shared by P2P clients are processed by the client software. As part of this processing, a hashed algorithm value is computed for each file and/or piece of a file being shared (dependent on the P2P file sharing network), which uniquely identifies it on the network. A file (or piece of a file) processed by this hash algorithm operation results in the creation of an associated hash value often referred to as a digital signature. Some hash algorithms provide a certainty exceeding 99.99 percent that two or more files with the same hash value are identical copies of the same file regardless of their file names. By using a hash algorithm to uniquely identify files on a P2P network, it improves the network efficiency. Because of this, typically, users may receive a selected file from numerous sources by accepting segments of the same file

from multiple clients and then reassembling the complete file on the local computer. This is referred to as multiple source downloads. This client program succeeds in reassembling the file from different sources only if all the segments came from exact copies of the same file. P2P file sharing networks use hash values to ensure exact copies of the same files are used during this process.

- 16. P2P file sharing networks, including the BitTorrent network, are frequently used to trade digital files of child pornography. These files include both images and movie files.
- 17. The BitTorrent network is a very popular and publicly available P2P sharing network. Most computers that are part of this network are referred to as "peers." The terms "peers" and "clients" can be used interchangeably when referring to the BitTorrent network. A peer can simultaneously provide files to some peers while downloading files from other peers.
- 18. The BitTorrent network can be accessed by computers running many different client programs, some of which include the BitTorrent client program, uTorrent client program, and Vuze client program. These client programs are publicly available and free P2P client software programs that can be downloaded from the internet. There are also BitTorrent client programs that are not free. These BitTorrent client programs share common protocols for network access and file sharing. The user interfaces, features, and configuration may vary between clients and versions of the same client.
- 19. During the installation of typical BitTorrent network client programs, various settings are established which configure the host computer to share files. Depending upon the BitTorrent client used, a user may have the ability to reconfigure some of those settings during installation or after installation has been completed. Typically, a setting establishes the location of one or more directories of folders whose contents (files) are made available to other BitTorrent network users to download.
- 20. In order to share a file or set of files on a BitTorrent network, a "Torrent" file needs to be created by the user that initially wants to share the file or set of files. A

"Torrent" is typically a small file that describes the file(s) that are being shared, which may include information on how to locate the file(s) on the BitTorrent network. A typical BitTorrent client will have the ability to create a "Torrent" file. It is important to note that the "Torrent" file does not contain the actual file(s) being shared, but information about the file(s) described in the "Torrent," such as the name(s) of the file(s) being referenced in the "Torrent" and the "info hash" of the "Torrent." The "info hash" is a SHA-1 hash value of the set of data describing the file(s) referenced in the "Torrent," which include the SHA-1 hash value of each piece, the file size, and the file name(s). The "info hash" of each "Torrent" uniquely identifies the "Torrent" file on the BitTorrent network. The "Torrent" file may also contain information on how to locate file(s) referenced in the "Torrent" by identifying "Trackers." "Trackers" are computers on the BitTorrent network that collate information about peers/clients that have recently reported they are sharing the file(s) referenced in the "Torrent" file. A "Tracker" is only a pointer to peers/clients on the network who may be sharing part or all of the file(s) referenced in the "Torrent." It is important to note that the "Trackers" do not actually have the file(s) and are used to facilitate the finding of other peers/clients that have the entire file(s) or at least a portion of the file(s) available for sharing. It should also be noted that the use of "Tracker(s)" on the BitTorrent network are not always necessary to locate peers/clients that have file(s) being shared from a particular "Torrent" file. There are many publicly available servers on the Internet that provide BitTorrent tracker services.

- Once a "Torrent" is created, in order to share the file(s) referenced in the "Torrent" file, a user typically makes the "Torrent" available for other users, such as via websites on the Internet.
- 22. In order to locate "Torrent" files of interest, a typical user will use keyword searches within the BitTorrent network client itself or on websites hosting "Torrents." Once a "Torrent" file is located that meets the keyword search criteria, the user will download the "Torrent" file to their computer. Alternatively, a user can also search for

27.

and locate "magnet links," which is a link that enables the BitTorrent network client program itself to download the "Torrent" to the computer. In either case, a "Torrent" file is downloaded to the user's computer. The BitTorrent network client will then process that "Torrent" file in order to find "Trackers" or utilize other means that will help facilitate finding other peers/clients on the network that have all or part of the file(s) referenced in the "Torrent" file. It is again important to note that the actual file(s) referenced in the "Torrent" are actually obtained directly from other peers/clients on the BitTorrent network and not the "Trackers" themselves. Typically, the "Trackers" on the network return information about remote peers/clients that have recently reported they have the same file(s) available for sharing (based on SHA-1 "info hash" value comparison), or parts of the same file(s), referenced in the "Torrent," to include the remote peers/clients Internet Protocol (IP) addresses.

For example, a person interested in obtaining child pornographic images on 23. the BitTorrent network would open the BitTorrent client application on his/her computer and conduct a keyword search for files using a term such as "preteen sex." (It should be noted that this search term may not have been used in this investigation.) The results of the torrent search are typically returned to the user's computer by displaying them on the torrent hosting website. The hosting website will typically display information about the torrent, which can include the name of the torrent file, the name of the file(s) referenced in the torrent file, the file(s) size, and the "info hash" SHA-1 value of the torrent file. The user then selects a torrent of interest to download to their computer. Typically, the BitTorrent client program will then process the torrent file. The user selects from the results displayed the file(s) they want to download that were referenced in the torrent file. Utilizing trackers and other BitTorrent network protocols (such as Distributed Hash Tables, Peer Exchange, and Local Peer Discovery), peers/clients are located that have recently reported they have the file(s) or parts of the file(s) referenced in the torrent file available for sharing. The file(s) is then downloaded directly from the computer(s) sharing the file. Typically, once the BitTorrent network client has downloaded part of the

file(s), it may immediately begin sharing the file with other users on the network. The BitTorrent network client program succeeds in reassembling the file(s) from different sources only if it receives "pieces" with the exact SHA-1 piece hash described in the torrent file. During the download process, a typical BitTorrent client program displays the Internet Protocol address of the peers/clients that appear to be sharing part or all of the file(s) referenced in the torrent file or other methods utilized by the BitTorrent network protocols. The downloaded file is then stored in the area previously designated by the user and/or the client program. The downloaded file(s), including the torrent file, will remain until moved or deleted.

- 24. Law Enforcement has created BitTorrent network client programs that obtain information from trackers about peers/clients recently reporting that they are involved in sharing digital files of known actual child pornography (based on the "info hash" SHA-1 hash value), which then allows the downloading of a file from a single IP address (as opposed to obtaining the file from multiple peers/clients on the network.) This procedure allows for the detection and investigation of those computers involved in sharing digital files of known actual child pornography on the BitTorrent network.
- 25. During the query and/or downloading process from a remote BitTorrent network client, certain information may be exchanged between the investigator's client and the remote client they are querying and/or downloading a file from. Such as 1) the remote client's IP address; 2) a confirmation from the remote client that they have pieces of the file(s) being requested, in whole or in part, and that the pieces of the file(s) is being reported as shared from the remote client program; and 3) the remote client program and version. This information may remain on the remote client's computer system for long periods of time. The investigator has the ability to log this information. A search can later be conducted on a seized computer system(s) for this information, which may provide further evidence that the investigator's client communicated with the remote client.

IV. STATEMENT OF PROBABLE CAUSE

- 26. In September 2018, while acting in an undercover capacity, SA Jesse Miller used a law enforcement version of BitTorrent to identify P2P users possessing and distributing image and video files depicting child pornography. SA Miller used the law enforcement version of BitTorrent to download files depicting child pornography from a P2P user at IP address 76.104.222.31 (the SUBJECT IP ADDRESS). The undercover downloads are detailed below.
- 27. Between September 11, 2018, at 11:11 UTC and September 13, 2018, at 5:20 UTC, SA Miller used the law enforcement version of BitTorrent to establish a single source connection with a P2P user at the IP address 76.104.222.31, the SUBJECT IP ADDRESS, who was determined to be in possession of suspected child pornography. Among the files downloaded from the SUBJECT IP ADDRESS was a video file, which I reviewed and describe below.

File: This is a five second video depicting a partially nude prepubescent female performing oral sex on an adult male. Based on her small stature compared to the adult male, youthful appearance, and lack of breast/muscular development, I estimate she is between four and seven years old.

28. On October 7, 2018, between approximately 3:40 UTC and 4:19 UTC, SA Miller used the law enforcement version of BitTorrent to establish a single source connection with a P2P user at the SUBJECT IP ADDRESS, who was determined to be in possession of suspected child pornography. Among the files downloaded from the SUBJECT IP ADDRESS was a folder containing a video file, which I reviewed and describe below.

File: This forty-nine second video depicts a nude prepubescent female lying on a bed as a nude adult male ejaculates on her genitals. The male then uses his hand to rub the ejaculate on and around her genitals. Based on her size in comparison to the male and lack of pubic/breast development, I estimate the child is under the age of twelve.

- 29. A query of a publicly available database revealed the SUBJECT IP ADDRESS belonged to Comcast Communications.
- 30. In response to administrative summons seeking subscriber information, Comcast Communications reported that during the dates and times of the downloads described above, the SUBJECT IP ADDRESS was assigned to R. Gaffney, and the service address was the SUBJECT PREMISES.
- 31. According to the Island County Assessor's Office, the SUBJECT PREMISES is owned by R. and D. GAFFNEY and was purchased in 1998. Washington DOL records show that R. Gaffney lists the SUBJECT PREMISES as R. Gaffney's mailing address. Agents conducted surveillance at the SUBJECT PREMISES on January 8, 2019, and saw two cars parked on or adjacent to the SUBJECT PREMISES, both of which are registered to R. and/or D. Gaffney. From my investigation, I believe their adult child also resides at the SUBJECT PREMISES.
- 32. On January 8, 2018, while conducting surveillance of the SUBJECT PREMISES, I used a portable electronic device to conduct a wireless survey at the front of the SUBJECT PREMISES and discovered numerous Wi-Fi enabled networks. The Wi-Fi networks were all locked, with one being named "Gaffney Family". I also detected an "xfinitywifi" wireless internet network in the area. Based on my training and experience, I know that Comcast deployed a series of wireless "hotspot" networks for their customers. Comcast accomplished this by providing their wireless internet customers with updated wireless routers capable of broadcasting an additional wireless network. These wireless "hotspot" networks are recognized by the connecting device as "xfinitywifi". Comcast customers can access "xfinitywifi" networks by logging in with their unique Comcast email or username and previously created password. Of particular importance is that the "xfinitywifi" networks are completely separate from the Comcast customer's private home wireless network(s). While conducting a prior investigation, an official confirmed that Comcast's "xfinitywifi" wireless networks are not linked or connected to the Comcast subscriber's internet service. Comcast advised that a unique IP

Address would be assigned to the customer logging in via "xfinitywifi" and attributed to that subscriber's Comcast account.

33. Based on my knowledge, training, and experience, and the experience of other law enforcement officers, I know that it is common for multiple individuals and computers within a residence to share Internet access. I believe that someone used at least one computer from the SUBJECT PREMISES to distribute child pornography via an Internet based P2P file sharing program, and that evidence of that crime will be found in the SUBJECT PREMISES.

V. PRIOR EFFORTS TO OBTAIN EVIDENCE

34. Any other means of obtaining the necessary evidence to prove the elements of computer/Internet-related crimes, for example, a consent search, could result in an unacceptable risk of the loss/destruction of the evidence sought. If agents pursued a consent-based interview with any known or unknown resident(s) or occupant(s) of the SUBJECT PREMISES, they could rightfully refuse to give consent and the P2P user who distributed child pornography files from a computer at the SUBJECT IP ADDRESS could arrange for destruction of all evidence of the crime before agents could return with a search warrant. Based on my knowledge, training and experience, the only effective means of collecting and preserving the required evidence in this case is through a search warrant. Based on my knowledge, no prior search warrant has been obtained to search the SUBJECT PREMISES.

VI. TECHNICAL BACKGROUND

35. Based on my training and experience, when an individual communicates through the Internet, the individual leaves an IP address which identifies the individual user by account and ISP (as described above). When an individual is using the Internet, the individual's IP address is visible to administrators of websites they visit. Further, the individual's IP address is broadcast during most Internet file and information exchanges that occur.

- 36. Based on my training and experience, I know that most ISPs provide only one IP address for each residential subscription. I also know that individuals often use multiple digital devices within their home to access the Internet, including desktop and laptop computers, tablets, and mobile phones. A device called a router is used to connect multiple digital devices to the Internet via the public IP address assigned (to the subscriber) by the ISP. A wireless router performs the functions of a router but also includes the functions of a wireless access point, allowing (wireless equipped) digital devices to connect to the Internet via radio waves, not cables. Based on my training and experience, today many residential Internet customers use a wireless router to create a computer network within their homes where users can simultaneously access the Internet (with the same public IP address) with multiple digital devices.
- 37. Based on my training and experience and information provided to me by computer forensic agents, I know that data can quickly and easily be transferred from one digital device to another digital device. Data can be transferred from computers or other digital devices to internal and/or external hard drives, tablets, mobile phones, and other mobile devices via a USB cable or other wired connection. Data can also be transferred between computers and digital devices by copying data to small, portable data storage devices including USB (often referred to as "thumb") drives, memory cards (Compact Flash, SD, microSD, etc.) and memory card readers, and optical discs (CDs/DVDs).
- 38. As outlined above, residential Internet users can simultaneously access the Internet in their homes with multiple digital devices. Also explained above is how data can quickly and easily be transferred from one digital device to another through the use of wired connections (hard drives, tablets, mobile phones, etc.) and portable storage devices (USB drives, memory cards, optical discs). Therefore, a user could access the Internet using their assigned public IP address, receive, transfer or download data, and then transfer that data to other digital devices which may or may not have been connected to the Internet during the date and time of the specified transaction.

- 39. Based on my training and experience, I have learned that the computer's ability to store images and videos in digital form makes the computer itself an ideal repository for child pornography. The size of hard drives used in computers (and other digital devices) has grown tremendously within the last several years. Hard drives with the capacity of four (4) terabytes (TB) are not uncommon. These drives can store thousands of images and videos at very high resolution.
- 40. Based on my training and experience, collectors and distributors of child pornography also use online resources to retrieve and store child pornography, including services offered by companies such as Google, Yahoo, Apple, and Dropbox, among others. The online services allow a user to set up an account with a remote computing service that provides email services and/or electronic storage of computer files in any variety of formats. A user can set up an online storage account from any computer with access to the Internet. Evidence of such online storage of child pornography is often found on the user's computer. Even in cases where online storage is used, however, evidence of child pornography can be found on the user's computer in most cases.
- 41. As is the case with most digital technology, communications by way of computer can be saved or stored on the computer used for these purposes. Storing this information can be intentional, i.e., by saving an email as a file on the computer or saving the location of one's favorite websites in, for example, "bookmarked" files. Digital information can also be retained unintentionally, e.g., traces of the path of an electronic communication may be automatically stored in many places (e.g., temporary files or ISP client software, among others). In addition to electronic communications, a computer user's Internet activities generally leave traces or "footprints" and history files of the browser application used. A forensic examiner often can recover evidence suggesting whether a computer contains wireless software, was using Yahoo messenger, and when certain files under investigation were uploaded or downloaded. Such information is often 20maintained indefinitely until overwritten by other data.

- 42. Based on my training and experience, I have learned that producers of child pornography can produce image and video digital files from the average digital camera, mobile phone, or tablet. These files can then be transferred from the mobile device to a computer or other digital device, using the various methods described above. The digital files can then be stored, manipulated, transferred, or printed directly from a computer or other digital device. Digital files can also be edited in ways similar to those by which a photograph may be altered; they can be lightened, darkened, cropped, or otherwise manipulated. As a result of this technology, it is relatively inexpensive and technically easy to produce, store, and distribute child pornography. In addition, there is an added benefit to the child pornographer in that this method of production is a difficult trail for law enforcement to follow.
- 43. As part of my training and experience, I have become familiar with the structure of the Internet, and I know that connections between computers on the Internet routinely cross state and international borders, even when the computers communicating with each other are in the same state. Individuals and entities use the Internet to gain access to a wide variety of information; to send information to, and receive information from, other individuals; to conduct commercial transactions; and to communicate via email.
- 44. Based on my training and experience, I know that cellular mobile phones (often referred to as "smart phones") have the capability to access the Internet and store information, such as images and videos. As a result, an individual using a smart phone can send, receive, and store files, including child pornography, without accessing a personal computer or laptop. An individual using a smart phone can also easily connect the device to a computer or other digital device, via a USB or similar cable, and transfer data files from one digital device to another.
- 45. As set forth herein and in Attachment B to this Affidavit, I seek permission to search for and seize evidence, fruits, and instrumentalities of the above-referenced crimes that might be found at the SUBJECT PREMISES in whatever form they are

found. It has been my experience that individuals involved in child pornography often prefer to store images of child pornography in electronic form. The ability to store images of child pornography in electronic form makes digital devices, examples of which are enumerated in Attachment B to this Affidavit, an ideal repository for child pornography because the images can be easily sent or received over the Internet. As a result, one form in which these items may be found is as electronic evidence stored on a digital device.

- 46. Based upon my knowledge, experience, and training in child pornography investigations, and the training and experience of other law enforcement officers with whom I have had discussions, I know that there are certain characteristics common to individuals who have a sexualized interest in children and depictions of children:
- a. They may receive sexual gratification, stimulation, and satisfaction from contact with children; or from fantasies they may have viewing children engaged in sexual activity or in sexually suggestive poses, such as in person, in photographs, or other visual media; or from literature describing such activity.
- b. They may collect sexually explicit or suggestive materials in a variety of media, including photographs, magazines, motion pictures, videotapes, books, slides, and/or drawings or other visual media. Such individuals often times use these materials for their own sexual arousal and gratification. Further, they may use these materials to lower the inhibitions of children they are attempting to seduce, to arouse the selected child partner, or to demonstrate the desired sexual acts. These individuals may keep records, to include names, contact information, and/or dates of these interactions, of the children they have attempted to seduce, arouse, or with whom they have engaged in the desired sexual acts.
- c. They often maintain any "hard copies" of child pornographic material that is, their pictures, films, video tapes, magazines, negatives, photographs, correspondence, mailing lists, books, tape recordings, etc., in the privacy and security of

their home or some other secure location. These individuals typically retain these "hard copies" of child pornographic material for many years, as they are highly valued.

- d. Likewise, they often maintain their child pornography collections that are in a digital or electronic format in a safe, secure and private environment, such as a computer and surrounding area. These collections are often maintained for several years and are kept close by, often at the individual's residence or some otherwise easily accessible location, to enable the owner to view the collection, which is valued highly. They also may opt to store the contraband in cloud accounts. Cloud storage is a model of data storage where the digital data is stored in logical pools, the physical storage can span multiple servers, and often locations, and the physical environment is typically owned and managed by a hosting company. Cloud storage allows the offender ready access to the material from any device that has an Internet connection, worldwide, while also attempting to obfuscate or limit the criminality of possession as the material is stored remotely and not on the offender's device.
- e. They also may correspond with and/or meet others to share information and materials; rarely destroy correspondence from other child pornography distributors/collectors; conceal such correspondence as they do their sexually explicit material; and often maintain lists of names, addresses, and telephone numbers of individuals with whom they have been in contact and who share the same interests in child pornography.
- f. They generally prefer not to be without their child pornography for any prolonged time period. This behavior has been documented by law enforcement officers involved in the investigation of child pornography throughout the world.
- 47. In addition to offenders who collect and store child pornography, law enforcement has encountered offenders who obtain child pornography from the internet, view the contents and subsequently delete the contraband, often after engaging in self-gratification. In light of technological advancements, increasing Internet speeds and worldwide availability of child sexual exploitative material, this phenomenon offers the

offender a sense of decreasing risk of being identified and/or apprehended with quantities of contraband. This type of consumer is commonly referred to as a 'seek and delete' offender, knowing that the same or different contraband satisfying their interests remain easily discoverable and accessible online for future viewing and self-gratification. I know that, regardless of whether a person discards or collects child pornography he/she accesses for purposes of viewing and sexual gratification, evidence of such activity is likely to be found on computers and related digital devices, including storage media, used by the person. This evidence may include the files themselves, logs of account access events, contact lists of others engaged in trafficking of child pornography, backup files, and other electronic artifacts that may be forensically recoverable.

- 48. Given the above-stated facts and based on my knowledge, training and experience, along with my discussions with other law enforcement officers who investigate child exploitation crimes, I believe that the user of the computer who shared the child pornography described above from the SUBJECT IP ADDRESS likely has a sexualized interest in children and depictions of children and that evidence of child pornography is likely to be found on digital media devices, including mobile and/or portable digital devices that found within the SUBJECT PREMISES.
- 49. Based on my training and experience, and that of computer forensic agents that I work and collaborate with on a daily basis, I know that every type and kind of information, data, record, sound or image can exist and be present as electronically stored information on any of a variety of computers, computer systems, digital devices, and other electronic storage media. I also know that electronic evidence can be moved easily from one digital device to another. As a result, I believe that electronic evidence may be stored on any digital device present at the SUBJECT PREMISES.
- 50. Based on my training and experience, and my consultation with computer forensic agents who are familiar with searches of computers, I know that in some cases the items set forth in Attachment B may take the form of files, documents, and other data that is user-generated and found on a digital device. In other cases, these items may take

the form of other types of data - including in some cases data generated automatically by the devices themselves.

- 51. Based on my training and experience, and my consultation with computer forensic agents who are familiar with searches of computers, I believe that if digital devices are found in the SUBJECT PREMISES there is probable cause to believe that the items set forth in Attachment B will be stored in those digital devices for a number of reasons, including but not limited to the following:
- a. Once created, electronically stored information (ESI) can be stored for years in very little space and at little or no cost. A great deal of ESI is created, and stored, moreover, even without a conscious act on the part of the device operator. For example, files that have been viewed via the Internet are sometimes automatically downloaded into a temporary Internet directory or "cache," without the knowledge of the device user. The browser often maintains a fixed amount of hard drive space devoted to these files, and the files are only overwritten as they are replaced with more recently viewed Internet pages or if a user takes affirmative steps to delete them. This ESI may include relevant and significant evidence regarding criminal activities, but also, and just as importantly, may include evidence of the identity of the device user, and when and how the device was used. Most often, some affirmative action is necessary to delete ESI. And even when such action has been deliberately taken, ESI can often be recovered, months or even years later, using forensic tools.
- b. Wholly apart from data created directly (or indirectly) by usergenerated files, digital devices in particular, a computer's internal hard drive contain electronic evidence of how a digital device has been used, what is has been used for, and who has used it. This evidence can take the form of operating system configurations, artifacts from operating systems or application operations, file system data structures, and virtual memory "swap" or paging files. Computer users typically do not erase or delete this evidence, because special software is typically required for that task. However, it is technically possible for a user to use such specialized software to delete this type of

information - and, the use of such special software may itself result in ESI that is relevant to the criminal investigation. HSI agents in this case have consulted on computer forensic matters with law enforcement employees with specialized knowledge and training in computers, networks, and Internet communications. In particular, to properly retrieve and analyze electronically stored (computer) data, and to ensure accuracy and completeness of such data and to prevent loss of the data either from accidental or programmed destruction, it is necessary to conduct a forensic examination of the computers. To effect such accuracy and completeness, it may also be necessary to analyze not only data storage devices, but also peripheral devices which may be interdependent, the software to operate them, and related instruction manuals containing directions concerning operation of the computer and software.

VII. SEARCH AND/OR SEIZURE OF DIGITAL DEVICES

- 52. In addition, based on my training and experience and that of computer forensic agents that I work and collaborate with on a daily basis, I know that in most cases it is impossible to successfully conduct a complete, accurate, and reliable search for electronic evidence stored on a digital device during the physical search of a search site for a number of reasons, including but not limited to the following:
- a. Technical Requirements: Searching digital devices for criminal evidence is a highly technical process requiring specific expertise and a properly controlled environment. The vast array of digital hardware and software available requires even digital experts to specialize in particular systems and applications, so it is difficult to know before a search which expert is qualified to analyze the particular system(s) and electronic evidence found at a search site. As a result, it is not always possible to bring to the search site all of the necessary personnel, technical manuals, and specialized equipment to conduct a thorough search of every possible digital device/system present. In addition, electronic evidence search protocols are exacting scientific procedures designed to protect the integrity of the evidence and to recover even hidden, erased, compressed, password-protected, or encrypted files. Since ESI is

extremely vulnerable to inadvertent or intentional modification or destruction (both from external sources and from destructive code embedded in the system such as a "booby trap"), a controlled environment is often essential to ensure its complete and accurate analysis.

- b. Volume of Evidence: The volume of data stored on many digital devices is typically so large that it is impossible to search for criminal evidence in a reasonable period of time during the execution of the physical search of a search site. A single megabyte of storage space is the equivalent of 500 double-spaced pages of text. A single gigabyte of storage space, or 1,000 megabytes, is the equivalent of 500,000 double-spaced pages of text. Computer hard drives are now being sold for personal computers capable of storing up to four terabytes (4,000 gigabytes of data.) Additionally, this data may be stored in a variety of formats or may be encrypted (several new commercially available operating systems provide for automatic encryption of data upon shutdown of the computer).
- Attachment B may require a range of data analysis techniques. In some cases, it is possible for agents and analysts to conduct carefully targeted searches that can locate evidence without requiring a time-consuming manual search through unrelated materials that may be commingled with criminal evidence. In other cases, however, such techniques may not yield the evidence described in the warrant, and law enforcement personnel with appropriate expertise may need to conduct more extensive searches, such as scanning areas of the disk not allocated to listed files or peruse every file briefly to determine whether it falls within the scope of the warrant.
- 53. In this particular case, and in order to protect the third-party privacy of innocent individuals residing in the residence, the following are search techniques that will be applied:
- i. Device use and ownership will be determined through interviews, if possible, and through the identification of user account(s), associated account names, and

logons associated with the device. Determination of whether a password is used to lock a user's profile on the device(s) will assist in knowing who had access to the device or whether the password prevented access.

- ii. Use of hash value library searches.
- iii. Use of keyword searches, i.e., utilizing key words that are known to be associated with the sharing of child pornography.
- iv. Identification of non-default programs that are commonly known to be used for the exchange and viewing of child pornography, such as, eMule, uTorrent, BitTorrent, Ares, Shareaza, Vuze, Gnutella, etc.
- v. Looking for file names indicative of child pornography, such as, PTHC, PTSC, Lolita, 3yo, etc. and file names identified during the undercover download of child pornography.
 - vi. Viewing of image files and video files.
- vii. As indicated above, the search will be limited to evidence of child pornography and will not include looking for personal documents and files that are unrelated to the crime.
- 54. These search techniques may not all be required or used in a particular order for the identification of digital devices containing items set forth in Attachment B to this Affidavit. However, these search techniques will be used systematically in an effort to protect the privacy of third parties. Use of these tools will allow for the quick identification of items authorized to be seized pursuant to Attachment B to this Affidavit, and will also assist in the early exclusion of digital devices and/or files which do not fall within the scope of items authorized to be seized pursuant to Attachment B to this Affidavit.
- 55. In accordance with the information in this Affidavit, law enforcement personnel will execute the search of digital devices seized pursuant to this warrant as follows:

- a. Upon securing the search site, the search team will conduct an initial review of any digital devices/systems to determine whether the ESI contained therein can be searched and/or duplicated on site in a reasonable amount of time and without jeopardizing the ability to accurately preserve the data.
- b. If, based on their training and experience, and the resources available to them at the search site, the search team determines it is not practical to make an on-site search, or to make an on-site copy of the ESI within a reasonable amount of time and without jeopardizing the ability to accurately preserve the data, then the digital devices will be seized and transported to an appropriate law enforcement laboratory for review and to be forensically copied ("imaged"), as appropriate.
- c. In order to examine the ESI in a forensically sound manner, law enforcement personnel with appropriate expertise will produce a complete forensic image, if possible and appropriate, of any digital device that is found to contain data or items that fall within the scope of Attachment B of this Affidavit. In addition, appropriately trained personnel may search for and attempt to recover deleted, hidden, or encrypted data to determine whether the data fall within the list of items to be seized pursuant to the warrant. In order to search fully for the items identified in the warrant, law enforcement personnel, which may include investigative agents, may then examine all of the data contained in the forensic image/s and/or on the digital devices to view their precise contents and determine whether the data fall within the list of items to be seized pursuant to the warrant.
- d. The search techniques that will be used will be only those methodologies, techniques and protocols as may reasonably be expected to find, identify, segregate and/or duplicate the items authorized to be seized pursuant to Attachment B to this Affidavit.
- e. If, after conducting its examination, law enforcement personnel determine that any digital device is an instrumentality of the criminal offenses referenced above, the government may retain that device during the pendency of the case as

necessary to, among other things, preserve the instrumentality evidence for trial, ensure the chain of custody, and litigate the issue of forfeiture.

- 56. In order to search for ESI that falls within the list of items to be seized pursuant to Attachment B to this Affidavit, law enforcement personnel will seize and search the following items (heretofore and hereinafter referred to as "digital devices"), subject to the procedures set forth above:
- a. Any digital device capable of being used to commit, further, or store evidence of the offense(s) listed above;
- b. Any digital device used to facilitate the transmission, creation, display, encoding, or storage of data, including word processing equipment, modems, docking stations, monitors, printers, cameras, encryption devices, and optical scanners;
- c. Any magnetic, electronic, or optical storage device capable of storing data, such as disks, tapes, CD-ROMs, CD-Rs, CD-RWs, DVDs, printer or memory buffers, smart cards, PC cards, memory sticks, flash drives, thumb drives, camera memory cards, media cards, electronic notebooks, and personal digital assistants;
- d. Any documentation, operating logs and reference manuals regarding the operation of the digital device, or software;
- e. Any applications, utility programs, compilers, interpreters, and other software used to facilitate direct or indirect communication with the device hardware, or ESI to be searched;
- f. Any physical keys, encryption devices, dongles and similar physical items that are necessary to gain access to the digital device, or ESI; and
- g. Any passwords, password files, test keys, encryption codes or other information necessary to access the digital device or ESI.

26 ||

27 ||

28 ||

1 VIII. CONCLUSION 2 Based on the foregoing, I believe there is probable cause that evidence, 57. fruits, and instrumentalities of violations of 18 U.S.C. § 2252(a)(2) (Receipt or 3 Distribution of Child Pornography) and 18 U.S.C. § 2252(a)(4)(B) (Possession of Child 4 Pornography), are located at the SUBJECT PREMISES as more fully described in 5 Attachment A to this Affidavit, as well as on and in any digital devices found therein. I 6 7 therefore request that the court issue a warrant authorizing a search of the 8 locations/person specified in Attachment A for the items more fully described in 9 Attachment B. 10 11 Patrick Mize, Special Agent 12 Department of Homeland Security 13 Homeland Security Investigations 14 15 SUBSCRIBED and SWORN to before me this 16 17 18 19 PAULA L. MCCANDLIS 20 United States Magistrate Judge 21 22 23 24 25 26 27

1.0

ATTACHMENT A

Description of Property to be Searched

The physical address of the SUBJECT PREMISES is 941 SW Quinalt Street, Oak Harbor, Washington 98277, and is more fully described as a property containing a twostory single-family home with a two-car garage, blue color siding with off-white trim. On the front of the house is tan numbers "941".

The search is to include all rooms, persons, and vehicles on the SUBJECT PREMISES and all garages or outbuildings, attached or detached, and any digital device(s) found therein.

ATTACHMENT A - 1 USAO #2019R00170

UNITED STATES ATTORNEY 700 Stewart Street, Suite 5220 SEATTLE, WASHINGTON 98101 (206) 553-7970

ATTACHMENT B

ITEMS TO BE SEIZED

The following records, documents, files, or materials, in whatever form, including handmade or mechanical form (such as printed, written, handwritten, or typed), photocopies or other photographic form, and electrical, electronic, and magnetic form (such as CDs, DVDs, smart cards, thumb drives, camera memory cards, electronic notebooks, or any other storage medium), that constitute evidence, instrumentalities, or fruits of violations of 18 U.S.C. § 2252(a)(2) (Receipt or Distribution of Child Pornography) and 18 U.S.C. § 2252(a)(4)(B) (Possession of Child Pornography) which may be found at the SUBJECT PREMISES:

- 1. Any visual depiction of minor(s) engaged in sexually explicit conduct, in any format or media;
- 2. Evidence of the installation and use of P2P software, and any associated logs, saved user names and passwords, shared files, and browsing history;
- 3. Letters, e-mail, text messages, and other correspondence identifying persons transmitting child pornography, or evidencing the transmission of child pornography, through interstate or foreign commerce, including by mail or by computer;
- 4. All invoices, purchase agreements, catalogs, canceled checks, money order receipts, credit card statements or other documents pertaining to the transportation or purchasing of images of minors engaged in sexually explicit conduct;
- 5. Any and all address books, names, lists of names, telephone numbers, and addresses of individuals engaged in the transfer, exchange, or sale of child pornography or evidencing contact with minors;
- 6. Any non-digital recording devices and non-digital media capable of storing images and videos.
- 7. Digital devices and/or their components, which include, but are not limited to:

- a. Any digital devices and storage device capable of being used to commit, further, or store evidence of the offense listed above;
- b. Any digital devices used to facilitate the transmission, creation, display, encoding or storage of data, including word processing equipment, modems, docking stations, monitors, cameras, printers, encryption devices, and optical scanners;
- c. Any magnetic, electronic, or optical storage device capable of storing data, such as disks, tapes, CD-ROMs, CD-Rs, CD-RWs, DVDs, printer or memory buffers, smart cards, PC cards, memory sticks, flash drives, USB/thumb drives, camera memory cards, media cards, electronic notebooks, and personal digital assistants;
- d. Any documentation, operating logs and reference manuals regarding the operation of the digital device or software;
- e. Any applications, utility programs, compilers, interpreters, and other software used to facilitate direct or indirect communication with the computer hardware, storage devices, or data to be searched;
- f. Any physical keys, encryption devices, dongles and similar physical items that are necessary to gain access to the computer equipment, storage devices or data; and
- g. Any passwords, password files, test keys, encryption codes or other information necessary to access the computer equipment, storage devices or data;
- 8. Evidence of who used, owned or controlled any seized digital device(s) at the time the things described in this warrant were created, edited, or deleted, such as logs, registry entries, saved user names and passwords, documents, and browsing history;
- 9. Evidence of malware that would allow others to control any seized digital device(s) such as viruses, Trojan horses, and other forms of malicious software, as well as evidence of the presence or absence of security software designed to detect malware; as well as evidence of the lack of such malware;
- 10. Evidence of the attachment to the digital device(s) of other storage devices or similar containers for electronic evidence;